

Remarks

Reconsideration of this Application is respectfully requested. Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

I. Status of the Claims

Upon entry of the foregoing amendment, claims 31-122 are pending in the application, with 31-35, 52, 70, 89 and 106 being the independent claims. These changes are believed to introduce no new matter, and their entry is respectfully requested.

II. The Amendment

Claims 32, 34, 35, 37, 40, 42, 44, 52, 54, 57, 59, 61, 70, 72, 75, 77, 79, 89, 91, 94, 96, 98, 106, 108, 111, 113, and 115 have been amended to more particularly point out what Applicants regard as the invention. Based on the suggestion by the Examiner, these amended claims now recite that the claimed polypeptide variants have at least 95% identity to the amino acid sequence set forth in Figures 23A-C and SEQ ID NO: 35, or have least 95% identity to amino acids 23-452 of the amino acid sequence set forth in Figures 23A-C and SEQ ID NO: 35.

The amendments to the claims do not introduce any new matter. Accordingly, entry of this amendment is respectfully requested.

III. Rejections Under 35 U.S.C. § 112

At pages 2-4 of the Office action, claims 32, 34-35, 37, 40, 42, 44-52, 54, 57, 59, 61-70, 72, 75, 77, 79-89, 91, 94, 96, 98-106, 108, 111, 113, and 115-122 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. More specifically, the Examiner alleges that the specification does not disclose which specific amino acids can be substituted for which amino acids for variants with 90% identity. Using a formula of $(.66)^x \times 100\%$ for calculation of "x" random mutations, the Examiner alleges that "90% identity would require an inordinate amount of experimentation and with no guidance as to what specific amino acids to change and what to change them to. However, the Examiner states that a 95% identity would be *allowed*. (emphasis added). Further, the Examiner states that undue experimentation would be required to determine what specific residues can be changed to and still retain enzymatic activity, even though the 90% identity of the 50 K-cellulase would be higher than the other claimed enzymes. Finally, the Examiner states that neither the teachings of Bowie *et al.* or Heikinheimo teach what specific residues can be changed to what in SEQ ID NO: 35 and still have activity remain. Applicants respectfully traverse the rejection.

Applicants reiterate the same arguments raised in the previous Amendment and Reply to the Office Action of April 14, 2006. Nevertheless, solely to expedite prosecution, and not in acquiescence to the Examiner's rejection, Applicants have amended claims 32, 34-35, 37, 40, 42, 44, 52, 54, 57, 59, 61, 70, 72, 75, 77, 79, 89, 91, 94, 96, 98, 106, 108, 111, 113, and 115. As presently amended, the polypeptide variants or an enzyme extract preparation comprising polypeptide variants have at least 95%

identity to the amino acid sequence set forth in Figures 23A-C and SEQ ID NO: 35, or have least 95% identity to amino acids 23-452 of the amino acid sequence set forth in Figures 23A-C and SEQ ID NO: 35, as found allowable by the Examiner.

Accordingly, in view of the above, Applicants respectfully request reconsideration and withdrawal of the rejection and objection.

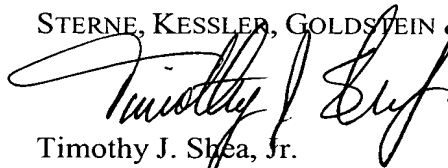
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Timothy J. Shea, Jr.
Attorney for Applicants
Registration No. 41,306

Date: January 24, 2007

1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600
602955v1